In the Claims

1 (currently amended). An isolated, recombinant, or purified polypeptide ~~comprising~~:

a) comprising SEQ ID NO: 3;

b) ~~a polypeptide fragment of SEQ ID NO: 3, said polypeptide fragment comprising~~ consisting of between 16 and 88 contiguous amino acids of SEQ ID NO: 3;

c) comprising a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3;

d) comprising a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3 ~~or a polypeptide fragment of SEQ ID NO: 3, said polypeptide fragment comprising between 16 and 88 contiguous amino acids of SEQ ID NO: 3~~; ~~or~~

~~d)~~e) comprising a multimeric construction comprising SEQ ID NO: 3 or a multimeric construction containing a polypeptide fragment of SEQ ID NO: 3 consisting of at least 16 consecutive amino acids of SEQ ID NO: 3 ~~, said polypeptide fragment comprising between16 and 88 contiguous amino acids of SEQ ID NO: 3~~;

wherein said isolated, recombinant or purified polypeptide elicits an immune response ~~has one or more of the following properties or activities: a) the ability to specifically bind to antibodies specific for SEQ ID NO: 2, 3, 4; b) the ability to specifically bind antibodies found in an animal or human infected with *A. phagocytophilum*; c) the ability to bind to, and activate T-cell receptors in the context of MHC Class I or Class II antigen that are isolated or derived from an animal or human infected with *A. phagocytophilum*; d) the ability to induce an immune response in an animal or human; e) the ability to induce a protective immune response in an animal or human against *A. phagocytophilum*; or f) the ability to direct the extracellular secretion of a polypeptide attached to a polypeptide comprising SEQ ID NO: 4~~.

2-37 (canceled).

38 (currently amended). The isolated, recombinant or purified polypeptide according to claim 1, wherein said polypeptide comprises SEQ ID NO: 3.

39 (currently amended). The isolated, recombinant or purified polypeptide according to claim 1, wherein said polypeptide consists of at least 16 contiguous amino acids of SEQ ID NO: 3~~comprises a polypeptide fragment of SEQ ID NO: 3, said polypeptide fragment comprising between 16 and 88 contiguous amino acids of SEQ ID NO: 3~~.

40 (currently amended). The isolated, recombinant or purified polypeptide according to claim 39, wherein said polypeptide ~~comprises SEQ ID NO: 2~~ consists of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

41 (currently amended). The isolated, recombinant or purified polypeptide according to ~~claim 39~~claim 1, wherein said polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3~~SEQ ID NO: 4~~.

42 (currently amended). The isolated, recombinant or purified polypeptide according to claim 1, wherein said polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3 ~~or a polypeptide fragment of SEQ ID NO: 3, said polypeptide fragment comprising between 16 and 88 contiguous amino acids of SEQ ID NO: 3~~.

43 (currently amended). The isolated, recombinant or purified polypeptide according to claim 1, wherein said polypeptide comprises a multimeric construction comprising SEQ ID NO: 3 ~~or a polypeptide fragment of SEQ ID NO: 3, said polypeptide fragment comprising between 16 and 88 contiguous amino acids of SEQ ID NO: 3~~.

44 (canceled).

45 (new). The isolated, recombinant or purified polypeptide according to claim 41, wherein said polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

46 (new). The isolated, recombinant or purified polypeptide according to claim 1, wherein said polypeptide comprises a multimeric construction that contains a polypeptide fragment consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

47 (new). The isolated, recombinant or purified polypeptide according to claim 46, wherein said polypeptide comprises a multimeric construction that contains a polypeptide fragment consisting of 16-88 consecutive amino acids of SEQ ID NO: 3.

48 (new). A composition comprising a component and:

a) an isolated polypeptide comprising SEQ ID NO: 3;

b) an isolated polypeptide consisting of between16 and 88 contiguous amino acids of SEQ ID NO: 3;

c) an isolated polypeptide comprising a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3;

d) a an isolated polypeptide comprising a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3;

e) an isolated polypeptide comprising a multimeric construction comprising SEQ ID NO: 3 or a multimeric construction containing a polypeptide fragment of SEQ ID NO: 3 consisting of at least 16 consecutive amino acids of SEQ ID NO: 3;

wherein said isolated, recombinant or purified polypeptide elicits an immune response.

49 (new). The composition according to claim 48, wherein said component is a solid support.

50 (new). The composition according to claim 49, wherein said solid support is selected from the group consisting of microtiter wells, magnetic beads, non-magnetic beads, agarose beads, glass, cellulose, plastics, polyethylene, polypropylene, polyester, nitrocellulose, nylon, and polysulfone.

51 (new). The composition according to claim 48, wherein said component is a pharmaceutically acceptable excipient.

52 (new). The composition according to claim 49, wherein said solid support provides an array of polypeptides and said array of polypeptides is selected from the group consisting of:

a) an isolated polypeptide comprising SEQ ID NO: 3;

b) an isolated polypeptide consisting of between16 and 88 contiguous amino acids of SEQ ID NO: 3;

c) an isolated polypeptide comprising a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3;

d) a an isolated polypeptide comprising a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3;

e) an isolated polypeptide comprising a multimeric construction comprising SEQ ID NO: 3 or a multimeric construction containing a polypeptide fragment of SEQ ID NO: 3 consisting of at least 16 consecutive amino acids of SEQ ID NO: 3; and

f) combinations of said polypeptides.

53 (new). The composition of claim 52, further comprising an additional antigen of interest.

54 (new). The composition of claim 48, further comprising an additional antigen of interest.

55 (new). The composition of claim 48, wherein said isolated polypeptide comprises SEQ ID NO: 3.

56 (new). The composition of claim 48, wherein said isolated polypeptide consists of at least 16 contiguous amino acids of SEQ ID NO: 3.

57 (new). The composition of claim 56, wherein said isolated polypeptide consists of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

58 (new). The composition of claim 48, wherein said isolated polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

59 (new). The composition of claim 48, wherein said isolated polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3.

60 (new). The composition of claim 48, wherein said isolated polypeptide comprises a multimeric construction comprising SEQ ID NO: 3.

61 (new). The composition of claim 58, wherein said isolated polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

62 (new). The composition of claim 48, wherein said isolated polypeptide comprises a multimeric construction that contains a polypeptide fragment consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

63 (new). The composition of claim 62, wherein said isolated polypeptide comprises a multimeric construction that contains a polypeptide fragment consisting of 16-88 consecutive amino acids of SEQ ID NO: 3.

64 (withdrawn-new). A method of inducing an immune response comprising administering to an individual a polypeptide:

a) comprising SEQ ID NO: 3;

b) consisting of between16 and 88 contiguous amino acids of SEQ ID NO: 3;

c) comprising a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3;

d) comprising a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3; or

e) comprising a multimeric construction comprising SEQ ID NO: 3 or a multimeric construction containing a polypeptide fragment of SEQ ID NO: 3 consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

65 (withdrawn-new). The method according to claim 64, wherein said method also comprises administering an additional antigen of interest.

66 (withdrawn-new). The method according to claim 64, wherein said polypeptide comprises SEQ ID NO: 3.

67 (withdrawn-new). The method according to claim 64, wherein said polypeptide consists of at least 16 contiguous amino acids of SEQ ID NO: 3.

68 (withdrawn-new). The method according to claim 57, wherein said polypeptide consists of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

69 (withdrawn-new). The method according to claim 64, wherein said polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

70 (withdrawn-new). The method according to claim 64, wherein said polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3.

71 (withdrawn-new). The method according to claim 64, wherein said polypeptide comprises a multimeric construction comprising SEQ ID NO: 3.

72 (withdrawn-new). The method according to claim 64, wherein said polypeptide comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

73 (withdrawn-new). The method according to claim 64, wherein said polypeptide comprises a multimeric construction that contains a polypeptide fragment consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

74 (withdrawn-new). The method according to claim 73, wherein said isolated polypeptide comprises a multimeric construction that contains a polypeptide fragment consisting of 16-88 consecutive amino acids of SEQ ID NO: 3.

75 (withdrawn-new). In a method of detecting the presence of antibodies that specifically bind to *Anaplasma phagocytophilum* or antigens thereof, the improvement comprising the use of a polypeptide:

a) comprising SEQ ID NO: 3;

b) consisting of between 16 and 88 contiguous amino acids of SEQ ID NO: 3;

c) comprising a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3;

d) comprising a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3; or

e) comprising a multimeric construction comprising SEQ ID NO: 3 or a multimeric construction containing a polypeptide fragment of SEQ ID NO: 3 consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

76 (withdrawn-new). In the method according to claim 75, the improvement comprising the use of a polypeptide comprising SEQ ID NO: 3.

77 (withdrawn-new). In the method according to claim 75, the improvement comprising the use of a polypeptide consisting of at least 16 contiguous amino acids of SEQ ID NO: 3.

78 (withdrawn-new). In the method according to claim 77, the improvement comprising the use of a polypeptide consisting of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

79 (withdrawn-new). In the method according to claim 75, the improvement comprising the use of a polypeptide comprising a heterologous polypeptide fused, in frame, to a polypeptide consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

80 (withdrawn-new). In the method according to claim 75, the improvement comprising the use of a polypeptide that comprises a heterologous polypeptide fused, in frame, to a polypeptide comprising SEQ ID NO: 3.

81 (withdrawn-new). In the method according to claim 75, the improvement comprising the use of a polypeptide that comprises a multimeric construction comprising SEQ ID NO: 3.

82 (withdrawn-new). In the method according to claim 79, the improvement comprising the use of a polypeptide that comprises a heterologous polypeptide fused, in frame, to a polypeptide consisting of 16 to 88 consecutive amino acids of SEQ ID NO: 3.

83 (withdrawn-new). In the method according to claim 75, the improvement comprising the use of a polypeptide that comprises a multimeric construction that contains a polypeptide fragment consisting of at least 16 consecutive amino acids of SEQ ID NO: 3.

84 (withdrawn-new). In the method according to claim 83, the improvement comprising the use of a polypeptide that comprises a multimeric construction that contains a polypeptide fragment consisting of 16-88 consecutive amino acids of SEQ ID NO: 3.